

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Improving Public Safety Communications in the 800 MHz Band)	WT Docket No. 02-55
)	
Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels)	
)	

To: The Commission

REPLY COMMENTS OF THE CITY OF BALTIMORE, MARYLAND

1. The City of Baltimore, Maryland ("Baltimore"), hereby submits these reply comments in response to the Commission's Notice of Proposed Rule Making ("NPRM") in the above-captioned proceeding, FCC 02-81, released March 15, 2002. Baltimore continues to believe that the interference problem may be overstated, and it strongly opposes any retuning or relocation of its own, recently installed, fully operational, and effective radio communications system. Any alteration of that system must be fully funded by parties other than Baltimore and cannot be safely implemented without building a redundant system that assures no down time or impaired time.

**The Risks of Moving Public Safety Operations to the 700 or 900 MHz Band
Outweigh the Potential Benefits.**

2. As outlined in its Comments, Baltimore spent approximately \$70 million in public funds to build its 800 MHz System,¹ which has been in service for less than four years. Specifically, Baltimore operates its system in the NPSPAC channels (821/824 - 866/869 MHz). Although Baltimore is

¹ Baltimore hereby corrects the statement in its initial Comments that it operates a Motorola SmartNet System. The system is a Motorola SmartZone Astro-Digital System. Baltimore County operates a SmartNet System. The City of Baltimore, to achieve interoperability, has exchanged system keys with Baltimore County and Howard County and will soon do so with Anne Arundel County.

experiencing some interference to its system,² the interference is not sufficiently disabling to warrant retuning Baltimore's system to other channels within the 800 MHz band or retuning and rebuilding it in the 700 or 900 MHz bands, as commenters have proposed. A complete rebuild of Baltimore's system in the 700 or 900 MHz bands would cost upwards of another \$70 Million, assuming equipment is available to operate in these bands. A retune of this magnitude is simply not reasonable or necessary for this system. The Commission must preserve the integrity of Baltimore's critical communications and avoid substantial unnecessary expenditures, particularly on a Public Safety system that was designed with great effort and functions effectively.

3. Baltimore cannot stress too strongly that the critical public safety functions of its system cannot tolerate any time when service is down or impaired. Thus the only way a retune could be implemented without danger to the public, would be to construct a fully redundant system that would have to be tested extensively and proven-out before cut-over to service. The Commission must recognize that requiring Public Safety Licensees to rebuild their 800 MHz systems from scratch results in much more than monetary costs. If Baltimore, or any other public safety entity, encounters any outages or other transition problems, the results could prove deadly. The Commission must carefully weigh the extent of the interference problem against possible costs resulting from a move of this sort and recognize the dangers involved should it require Baltimore and other cities and Public Safety operators to replace their systems or retune their facilities to new frequencies. Notwithstanding the Commission's authority under Section 303(c) of the Communications Act³ to assign radio frequencies, the Commission should exercise the authority to require retuning only as a very last resort and must in

² Baltimore's 800 MHz system has 28 channels. At any one time, Baltimore is unable to utilize 2-3 of its licensed channels due to third party interference. Although this loss of capacity is frustrating and unnecessary, it affects only capacity and not the ability of the system to function. Baltimore's Public Safety end users do not experience busy signals from the interference, because Baltimore's system is designed to automatically make the channel(s) subject to interference unavailable to its end users.

³ 47 U.S.C. § 303(c).

all events not put Public Safety agencies in a situation where they cannot effectively comply with their obligations under other laws or cannot comply with the Commission's plan because they do not have the funds to do so.

**The Commission Should Resolve Several Factual Issues
Before Developing Rules Intended to Eliminate Interference.**

4. It is clear, indeed obvious, from the record that there are substantial questions of fact concerning the extent of the public safety interference problem and whether there are technical solutions to the interference problem short of a wholesale reorganization of the spectrum. The Commission should resolve these outstanding factual issues before it proposes rules to eliminate, or at a minimum mitigate, the interference problem. In this regard, Baltimore urges the Commission to form a special task force charged with the responsibility of clarifying the record and ascertaining how wide-spread and invasive the interference problem is, as well as ascertaining whether a technical solution exists that will mitigate the interference problem without disrupting the entire 800 MHz band.⁴ This step could preserve critical Public Safety resources, monetary and other, and aid in expediting this proceeding.

5. In addition to the uncertainty regarding the extent of the interference problem, the views and suggested courses of action that commenters urge the Commission to follow are disparate. Some commenters suggest that the Commission retune the 800 MHz band to eliminate frequency interleaving, while others urge the Commission to generally realign the entire 800 MHz Band, including the

4 See Comments of DelMarva Power and Light Company and Atlantic City Electric Company at pp. 5-6 (hereinafter "*DP&L/ACE Comments*") (supports an in-depth study of the scope and source of interference to public safety operations); Comments of the National Association of Manufacturers and MRFAC, Inc. at p. 5 (urges FCC to gather additional information regarding what causes the public safety interference and possible solutions); and Comments of Cinergy Corporation at pp. 5-9 (urges Commission to conduct independent investigation into the Public Safety interference problem).

interleaved channels as well as the NPSPAC channels.⁵ However, several commenters argue that re-shuffling the 800 MHz band alone will not be sufficient to completely resolve the interference problem.⁶ Other commenters recommend that the Commission move Public Safety operations out of the 800 MHz band and put them at 700 or 900 MHz, while Public Safety operators argue this is not feasible due to the economic costs and safety issues involved with such a transition.

6. In addition to the spectrum realignment proposals, some parties urge the Commission to mandate technological solutions to the interference problem.⁷ Some parties recommend the implementation of filtering technologies within the handsets of the public safety radios, but note that this solution may result in faster consumption of battery power by mobiles. Another commenter urges the Commission to restrict the use of broadband hybrid combiners in the 800 MHz band.⁸ Still other parties, such as APCO, focus on broader spectrum policy issues and ask the Commission to provide Public Safety with additional spectrum.

7. These Commenters are, nevertheless, unanimous that re-tuning Public Safety operations is dangerous, and that the costs of retuning or rebuilding should not be imposed on Public Safety

⁵ See Comments of City of Austin, Texas at pp. 1-2; Comments of The City of Fort Lauderdale at p. 2; and Comments of The New York State Office for Technology, Statewide Wireless Network Project at pp. 1-3.

⁶ See Comments of Aeronautical Radio, Inc., JPJ Electronic Communications, Inc., Sid Richardson Energy Services Co., Intel Corporation, New York Communications Company *et al.*, at p. 22 (hereinafter “*Joint Comments*”); see also Comments of Danny Hampton at p. 2 (former Nextel engineer who states that Nextel’s use of hybrid combiners has increased the noise floor at these Nextel sites).

⁷ See Comments of the State of Florida at p. 1; Comments of the City of Portland, Oregon at pp. 5 and 11 (Motorola modification to Portland’s RF Boards improved receiver performance); Comments of Dallas Area Rapid Transit at p. 2; *DP&LACE Comments* at pp. 9-16; Comments of American Electric Power at pp. 13, 16-17 (hereinafter “*AEP Comments*”); and Comments of Verizon Wireless at pp. 8-10.

⁸ See *Joint Comments* at p. 29.

Authorities, who are not the cause of whatever problem exists. It is also clear that, like Baltimore, other cities and municipalities are greatly constrained by budgetary limitations and will not have the funds necessary to retune their systems. The current national economic downturn has ended any hope of revenue surpluses at the state and local level, making it impossible to budget the sums needed to rebuild radio systems like Baltimore's, which are doing their job effectively now.

8. The diversity of viewpoints in the record before the Commission underscores the need for the Commission to focus first and foremost on determining the facts underlying the harmful interference to existing Public Safety operations so as to be able to address interference problems effectively with the least amount of disruption and cost to the jurisdiction affected by the interference. This proceeding is not about getting commercial providers "better spectrum," getting Public Safety operators additional spectrum, limiting the legal liability of CMRS operators, engaging in spectrum-repacking gymnastics, or debating who needs to redesign, re-tune or rebuild their networks. It is about ensuring the public's safety by eliminating interference to Public Safety operations.

**Additional Factors Need To Be Considered if the Commission
Adopts Rules Requiring Public Safety Operations to Retune to New Frequencies.**

9. If the Commission chooses to realign the 800 MHz band, Baltimore urges it to adopt rules that adequately protect Public Safety operations during this time of transition. Protection includes conducting engineering studies to ensure that the frequencies to which Public Safety entities will be moved will be an adequate substitute for current spectrum allocations. For example, the 806-809 MHz band may not be an adequate substitute for Baltimore's operations in the 821-824 MHz band because there are propagation differences between these bands, and Baltimore will not know the impact in practice of the differences until Baltimore or other Public Safety operators try to operate on the new channels after they have been cleared of other operators.⁹ For obvious safety reasons, the

⁹ For example, if Baltimore continues to operate from its current tower locations and it changes frequencies to 806-809 MHz, it may not see the same coverage patterns it currently sees using

public must not be made to suffer any diminution in coverage or reliability, and the safety and welfare of the public cannot be compromised.

10. Aside from the technical issues involved with realigning the 800 MHz band, the Commission should also address how a retune of Baltimore's Public Safety operations will be implemented without risk to the public, which includes determining who will be responsible for implementing any retune. If forced to retune to new frequencies, it is critical that Baltimore be able to choose the party responsible for modifying its system and equipment and that it not be forced to rely on the work of commercial entities that have any stake in the outcome of the retune in terms of the use of their own spectrum. In addition, Baltimore currently has no funding in place for system modifications, upgrades or engineering studies and should not be expected to solicit its taxpayers for additional funds that benefit a commercial entity's interfering operations. On the contrary, Baltimore and other public safety entities should be reimbursed fully for all costs associated with any modifications to their systems, including both hard and soft costs, without a reimbursement cap. Finally, Baltimore cannot effectively do its job of protecting the public's safety if it experiences system outages or coverage reductions, regardless of how temporary in nature. The critical and sensitive nature of Baltimore's public safety traffic does not permit the placement of traffic to be put on a CMRS system, even on a temporary basis, during the time that channel retuning work is being done. Therefore, the only workable, safe alternative is for a redundant public safety system to be constructed and made fully operational before interrupting Baltimore's current system in order to ensure that Baltimore's system continues to operate seamlessly.

channels between 821-824 MHz. An engineering study will need to be conducted to determine what, if any, loss of coverage Baltimore will receive if it is forced out of the NPSPAC channels.

Interim Action

11. While the Commission resolves outstanding issues in this proceeding, Baltimore believes that it should direct all licensees that are interfering with other licensed facilities, particularly with public safety operations, to immediately take remedial action, including shutting down individual channels, if necessary, until a mutually agreeable solution has been adopted by all of the parties involved. Baltimore urges the Commission to strictly enforce its current regulations and policies regarding parties causing harmful interference to other operators, including Section 90.403(e) of its Rules and its “first-in-time” policy. Under Section 90.403(e) of the Rules, “licensees shall take reasonable precautions to avoid causing harmful interference. This includes monitoring the transmitting frequency for communications in progress and such other measures as may be necessary to minimize the potential for causing interference.”¹⁰ Under the Commission’s “first-in-time” policy, the “newcomer” to a frequency must bear the financial and general responsibility for eliminating objectionable interference it causes to an existing station.¹¹ Where public safety operators were in place prior to when a new licensee, whether Nextel or anyone else, began operating its system, the new licensee, and the new licensee alone, should be required to correct the interference problem.

Conclusion

12. As a matter of effective and responsible regulation and administration, Baltimore urges the Commission to make a comprehensive factual determination of the extent of the existing interference problems and to conduct independent engineering analyses to determine whether a technological

¹⁰ 47 C.F.R. § 90.403(e).

¹¹ *Midnight Sun Broadcasting*, 11 FCC Rcd 1119 (1947).

solution exists short of spectrum reorganization. To best accomplish this task, Baltimore believes that the FCC should form a special task force, as stated above. In addition, the Commission should immediately direct interfering entities to discontinue any and all operations that interfere with Public Safety operations until all of the parties involved agree upon a mutually acceptable solution to the interference problem.

13. It is a distraction to focus on rebanding, retuning and rebuilding as a first priority. Rather, as part and parcel of determining the facts, the Commission should do all it can to facilitate the adequacy of communications needed by Public Safety operators. Those who are on the front-line of protecting the public -- the First Responders -- must be assured that they have clear and interference-free communications. That is at the very heart of Homeland Security. The Commission's attention to other issues may follow in due course.

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Respectfully Submitted,



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